

March, 2003 Number 384

ARRL KIDS DAY ON JANUARY 4, 2003



Lauren and Bobby, harmonics of K4RLC, enjoyed Kid's Day, working Amber at VE3RCN and Josh VA3HHH on 20 meter SSB.

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The Exciter

The ***Exciter*** is the monthly newsletter of the Raleigh Amateur Radio Society. It is available in both printed and electronic form. The printed version is mailed to members just before each club meeting. The electronic form, in Adobe Acrobat PDF format, is e-mailed about a week earlier.

We solicit both articles and advertising. The deadline for submissions is first Friday of the month or Friday after the monthly meeting. Contact the Editor.

The views contained in the ***Exciter*** are those of the individual authors, and are not necessarily the views of the Editor, or the Raleigh Amateur Radio Society.

The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS) was founded in 1969 and continues to serve and support the Amateur Radio community in the greater Triangle area. In 1999, we incorporated a new RARS, and obtained 501(c)(3) Non-Profit tax status.

The objectives of the club are to promote worldwide friend-ship through Amateur Radio; to be of public service by providing radio communications in times of disaster, emergency, or civic need; to educate members in radio technique; and to provide training classes to assist in obtaining Amateur Radio licenses.

Anyone interested in Amateur Radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18.00 per year (from July 1 through June 30). Additional immediate family members pay \$5.00 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12.00 per year. Dues for non-licensed Associate members are \$9.00 per year.

Applications for membership may be obtained from the treasurer, or the RARS web site (www.rars.org).

Officers

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INFO

RARS Repeaters in Raleigh:
145.13
146.64
224.64
444.525 (88.5 PL)

WEB SITE <http://www.rars.org>

***NEXT RARS MEETING:
MARCH 4, 2003
HAPPY BIRTHDAY RARS PARTY***

***MAY MEETING WILL BE
MAY 13, 2003 PLEASE MARK
YOUR CALENDAR***

RALEIGH AMATEUR RADIO SOCIETY MEETINGS

Date: Every first Tues of the Month

***Location: Forest Hills Baptist Church, at Dixie
Trail and Clark Avenue, in Raleigh***

***Time: 7:30pm, Folks start showing up a bit before
7 to chat, brag and eat donuts.***

***VE TESTING: The RARS VEs will accept walk-in
testing which is on even months except April and
December. Please bring a photo ID, your original
current license if you have one, and any CSCEs
you need for credit.. Check into the 8:00 pm net
every night on the 146.64 repeater or
www.rars.org for information.***

ODYSSEY OF THE MIND

***Saturday March 8, 8:00-5:00 pm lunch provided
Wakefield High School in Raleigh.***

***There will be about 400 students competing in
problem solving events throughout the day. Please
- if you could work a full day or a half day let me
know. This is inside duty - function as shadow in
tournament rooms, registration, director, etc.
Contact Dick KD4ISC— 919-469-5322***

***MS Walk RTP
April 5th, 2003
Time: 7:30 am — 1:00 pm***

SPECIAL REQUEST FOR ASSISTANCE WITH RADIO NEWS HOUR

We are looking for someone to share responsibilities for playing the ARRL Radio Newshour every Sunday following the 8 PM net. The equipment needed for this is an interface between your computer and radio, such as a Rigblaster, as well as software to play a MPEG file. If you have questions or would like to volunteer, please contact Liz KF4UQZ or Mary KG4OQA.

MAY RARS MEETING **WILL BE ON 2ND** **TUES**

The MAY RARS meeting will be held on the 2nd Tuesday, May 13, This move is for May 2003 only, at the request of our host, the Forest Hills Baptist Church. The church has a large conference scheduled for the first Tuesday that requires all the large meeting rooms. RARS will maintain its regular 1st Tuesday date for all other meetings.

All RARS members can obtain a membership card by calling Denyse KG4CXR 919-468-5358 or email KG4CXR@nc.rr.com

FM Committee – RARS Tech Support meetings are held on the 5th Tuesday of any month that has 5 Tuesdays. Meetings are held at Danny Musten's office (KD4RAA)

The Raleigh Amateur Radio Society is now accepting credit card payments online for new members and membership renewals. You can join or renew your membership completely online using a secure credit card payment process.

See the RARS website www.rars.org for more information to sign up for RARS membership or renew for 1, 2 or 3 years

146.88 145.39, 147.105, & 147.135
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NET REPORTS FOR ***January, 2003***

- ♦ 8:00PM DAILY: RARS Evening Net
- ♦ 9:00PM MON: SWL SIG
- ♦ 8:30PM SAT : Tech & Traders net

Total Net Activity:

Minutes: 564
Check-Ins: 424 in 31 Sessions
Traffic : 36 brought 34 passed

ANTENNAS FOR BEGINNING HAMS

By Max KO4TV

Part I of a Two Part Article on Antennas

One of the most challenging, and yet rewarding, aspects of Ham Radio is the construction and installation of antennas. Since most, if not all, beginning Hams use commercially manufactured transceivers and other equipment, antennas are among the only items left to the imagination and ingenuity of beginning Hams. Even if you decide to purchase a commercially available antenna, there are many pitfalls to avoid. Just as "patriotism is the final refuge of the scoundrel," antenna advertising is sometimes the refuge of scoundrels, with the unsuspecting ham being the victim. Some unscrupulous vendors will advertise that their antennas will "punch holes through mountain ranges," "violate all laws of physics," and otherwise perform miracles beyond belief. As my wise old pappy always said, "Son, anything that sounds too good to be true usually is." So, before getting into any details of antenna construction, let us clear the air about their claims.

First, we need to become familiar with the different types of antennas, their strengths and limitations, and how they compare with one another. Antennas are commonly described in several categories: polarization, beam width, front-to-back ratio, Radiation angle, and most importantly, GAIN! Therein lies the basis of most misunderstanding: an antenna is a passive device, and as such, can have NO gain in and of itself! When an antenna is referred to as having gain, it is always in comparison with another antenna, usually one of lesser "gain." Just as soap manufacturers always claim their products "get clothes cleaner," the first question should be, "gets them cleaner than what? Another soap product, or a mixture of chimney soot and North Carolina red mud?". The same applies to antennas. Any antenna claiming "gain" should specify what it is being compared to. Antenna gain performance is usually expressed in Decibels, or dB, a unit of measurement named for Dr. Alexander Graham Bell.

A dB is not a fixed unit, like an inch, a gallon or a pound, but is a ratio of power, voltage, sound level, etc. There are two standards by which most antennas are measured: The dBi (Decibels of gain over an isotropic antenna), and the dBd (Decibels of gain over a half-wave dipole). The dBi is rarely used in Ham Radio, except for measurements of parabolic dish antennas used for microwave communications. It is the theoretical radiation pattern of an antenna which radiates energy equally in all directions, which is impossible in the real world. A much more common and useful measurement is the dBd, or Decibels over a half-wave dipole, which is a real antenna and is readily available for comparison to the average ham. The Decibel is a unit of ratio, equivalent to an increase or decrease of about 26% from the standard of comparison. Thus, a 1 dB gain represents an increase of about 26%. 2 dB represents an increase of about 26% over the last figure, 3 dB about another 26%, and so on. Thus, as you can see, a dB is not a fixed amount, but increases or decreases in a logarithmic fashion. It is commonly termed, "A rubber yardstick." So, the first thing to watch out for is any manufacturer that claims a certain dB gain without specifying what the gain is referred to. A gain of 3 dB represents an increase of about double the previous amount. Thus, going from 1 watt to 2 watts is a 3 dB gain; also, going from 100 watts to 200 watts is a 3 dB gain! So, as we can easily see, a dB, in and of itself, means nothing without a previous reference point.

That's about enough confusion for one month, so next month we will present a chart showing the relative gain of different types of antennas, along with the advantages and disadvantages of each.

WAKE ARES MEETING DEBRIEFING

By Mary KG4OQA



Many local amateur operators participated in the emergency communications efforts during the ice storm in December, either by volunteering at local shelters, the state Emergency Operations Center (EOC), the county EOC, or by volunteering their time with other logistical matters. Wake ARES held a debriefing on February 1st at the state EOC for all who participated in these efforts to address what was done well and what can be improved upon in the future.

John Guerriero KG4HDT and Tom Brown N4TAB facilitated discussion and summarized the statewide and local efforts. Special guest Chan Eaton W1IFL, Communications Function Lead for Disaster Services for the Red Cross, praised the group for their support of the Red Cross during the disaster. Eaton also ad-

ressed some of the future plans that the Red Cross has for modernizing its communications capabilities.

Those in attendance shared a variety of thoughts on what was done well during the disaster. It was overwhelmingly agreed that amateur operators did an exemplary job at the shelters, the EOC's, and anywhere that they were needed. Operators helped across county lines, as this disaster clearly had no county boundaries. Gary Pearce KN4AQ passed around the February issue of CQ that highlighted local efforts during the storm.

As far as suggestions for improvement, ideas focused around the development of overall preparedness, including individual responsibility regarding radio maintenance and knowledge, alternative power sources, and self-sufficiency.

Members are encouraged to keep their skills up to date by regularly participating in the local nets, such as PCTN and the Wake ARES nets.



Frank W4FAL



Chan W1IFL

Photos by David KF4VXJ

EARLY RARS SUPPORTER W4HUW

Most of the present members of RARS are probably unaware of the role that one of the early supporters of RARS, Max Silvers, W4HUW SK, actually played in helping to establish our new fledgling organization. I sorry to report that Max died at the age of 87 on Monday, January 13th 2003.

When the RARS club was still just a few months old a regular meeting place had still not been found. Max contacted me (I was the first president of RARS) to see if we would be interested in meeting in the State Civil Defense area in the sub-basement of the Jones Street Building. He was then serving as Radio Engineer for the State Department of Civil Defense in that facility.

Needless to say, we literally jumped at that opportunity and used the facility for some years until we outgrew it, and coincidentally, the state needed to use that area for other purposes.

Max, W4HUW (or hungry uncle Willie, as he identified himself on the air) assumed a lot of extra responsibility and extended his work day significantly by serving as club sponsor because he had to be present during any period of time that we occupied the facility. His efforts were most appreciated. He met with us and supported us in all ways possible in those early years. And, those were growing years for RARS. Most radio clubs in that era usually had quite small memberships. We watch with great pleasure as the roster reached for 100, which was four or five times the usual club's size.

It was also in that time frame that we put the first RARS repeater (W4DW - 146.64 mHz) on the air using tired old Motorola Railroad hardware. But, it worked and served us well for years.

Max also ran interference for RARS into the Governor's office. Bob Scott was governor at that time, and RARS enjoyed the full support of that governor. Those were interesting times!

RARS owes a lot to good old Max!

Ed Alderman WA4PEN
(Past President RARS)

TECH/TRADER NET
8:30 PM SATURDAYS ON 146.64
TWO NETS IN ONE!

**TUNE IN THE
RARS NEWS HOUR**

♦ **Newsline**
♦ **ARRL Audio News**
Sunday Nights following the
RARS 8:00 Net on 146.64

RARS NEW MEMBERS

FEBRUARY 2003

We would like to welcome our new members to RARS. Thank you for considering us for your amateur radio club.

DICK W4RGC
TIM W4TIM

VIRGINIA KG4PFA

GIL KG4Y?? Gil passed the test at the Feb RARS meeting and waiting for his ticket. **Congratulations Gil.**

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KID'S DAY (Front Cover)

By Bob K4RLC

Kid's Day is an ARRL activity, designed to expose young people to amateur radio. It occurs twice a year, in January and June. Kid's Day is a time to invite young people (licensed or not) into your shack and give them the opportunity to talk with other kids around the country or in other countries. Traditionally, the kids exchange their name, age, location and favorite color. Frequencies are recommended in the 20, 15 and 10 meter bands.

This past Kid's Day, the IRLP operated a national net for those without HF access, or who couldn't fight the propagation problems. Some special adult stations are usually on, giving the kids a special contact. For example, W5RRR at NASA/Johnson Space Center where the astronauts take classes for their ham licenses, usually operates every Kid's Day. The operators encourage the kids to "keep your eyes on the skies, look to the stars, and follow your dreams." W5RRR's QSL has several color photos of the Space Shuttle, and kids really like it!

Hopefully, with this hands-on experience on-the-air, young people talking with other young people over the magic of ham radio, will want to eventually obtain their own ham license. They may even grow up to enjoy Field Day. Colorful certificates for each child can be downloaded from the ARRL website to commemorate their participation in Kid's Day.

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RARS Board Meeting – November 19, 2002

The meeting was called to order by President Bernard Blackmon W4BRB at 7:30. Board members present included: K1RCB, KA2FWC, KG4OQA, NI4S, WA2UZO, K4HM, AC4ZO, KE4PAX. Guests included KG4RMT, KD4ZVW, N4IXL

VP Report – Bob's arranged entertainment for the Holiday party – music by guitar and flute.

FM/Repeater report – KA2FWC says N4TAB has promised the 444.525 repeater by the weekend. W4BRB said the NC State site for 145.13 is almost ready. It needs a piece of hardline run.

Net Manager report – KG4OQA announced that the RARS 8 PM net participated in the annual Statewide Simulated Emergency Test using emergency power and temporary antennas.

Webmaster report – WA2UZO reported that W4NOT is working on hamfest volunteer schedule on-line, with volunteers able to enter their own info.

Member services report – Nothing to report

Hamfest report – K4HM says info is out to dealers. Advertising to the public starts in January.

PIO report – KN4AQ reported that Thomas Babb, EC Central Carolina SKYWARN, was able to get media coverage on News 14 of amateur radio operator activity during the storms through NC and Tennessee.

Education – KN4AQ said class will start early in March. No info available on the code class that was rumored for fall.

ARRL – K1RCB and KD4ISC have passed their Level 1 ARRL course, and are ready to mentor.

Public Service – no report.

Unfinished business:

NI4S reported that he has found a deal on a Mitubishi projector with free spare bulb. He will review it with Greg and arrange purchase.

Treasurer's report - KE4PAX said taxes have been completed and mailed. He will set up financial review with committee soon. There's 278 members.

W4BRB received note from Lou Olsen – has satellite equipment (dishes, test equipment at 4 GHz, new in box) to get into hands of hams. RARS can help publicize this on the mailing list.

On-Line Dues/ payment. WA2UZO presented his proposal to implement dues and hamfest payment via PayPal, starting from the RARS web site (but being completed at the PayPal site). He proposes that members pay the same rates, using same pro-rated schedule. RARS will cover the small PayPal cost. A "donation" option will be available for those who want to contribute more than the minimum dues. Members will use a new on-line form that will calculate the pro-rated dues. One change from Joe's proposal was to drop the offer to join in April and get dues free until June. That deal will be offered only at the Hamfest.

AC4ZO moved, KA2FWC 2nd to cancel the December Board Meeting, as is the Board's custom.

W4BRB thanked all board members for their hard work this year. The meeting adjourned at 9:40 pm

Filling in for the Secretary – Gary Pearce KN4AQ

**The Central Carolina
Skywarn Net Meets
Tuesdays at 9:15 PM
on 146.88 Repeater**



Remember to give damage reports AFTER the storms as well as DURING the storms.

JEFFERY ORROCK



SKYWARN MONTHLY DINNER MEETING

by Thomas KF4JKQ EC Skywarn Wake County

We have a new national weather service warning coordination meteorologist, Jeffrey A Orrock from Newport National Weather Service. We welcome Jeff to our area. Our first spotters class will be held at the Fuquay Fire station #1 on Monday, April 14. There will be limited seating. Please email Thomas Babb kf4jkq@arrl.net if you would like to attend.

Our Monthly skywarn dinner in March 30, 2003 will be announced on the nets. We hope to move the dinner to different areas so everyone can attend.



Every Wednesday 9:30 145.19



**Join Us At the
RARS Dinner**



**On 4th Tuesday, 6:30 pm at
Fat Daddy's on Glenwood Ave.**

HAMFEST CALENDAR

March 8-9	Charlotte, NC
March 23	Kinston, NC
APRIL 13	RALEIGH, NC
April 5	Union, SC
April 19	Morganton, NC
May 10	Durham, NC
May 16-18	Dayton, OH



Courtesy of the SERA Repeater Journal

RARS GENERAL MEMBERSHIP MEETING Tuesday, February 4, 2003

President Bernard Blackmon called the meeting to order at 7:30 PM and welcomed guest Jack Pegram.

Treasurer's Report (Greg KE4PAX): There are currently 285 members

Announcements (by W4BRB unless otherwise stated):

Carl King KU4HM is recovering from a back injury and has asked for assistance to re-attach his 80-meter antenna that was blown down in a recent storm.

- **Next RARS Technician Class will start in March. Need volunteers to distribute advertising flyers.**
- **Still looking for help at the upcoming Hamfest. Jeff AC4ZO has tickets for sale.**
- **John KG4HDT announced the new PCTN Traffic Net Manager is Mike AD4MP.**
- **Tanner Lovelace from the organization "Odyssey of the Mind" requested assistance of hams for their upcoming festival. Bob K1RCB is working this.**

Andy NI4S introduced the program for the evening, which was an orientation and review of RARS repeaters by Gary KN4AQ and Fred Decker N4IXL.

Door prizes were won by: KB4TYE, KA2FWC, KG4CXR, and KG4SWI.

The meeting adjourned at 9:22 PM.

Respectfully submitted by Jim Walter KG4FIJ, Secretary.



Photos of the 145.13 repeater to be installed at the DH Hill Library site.

Above picture is Tom N4TAB (left) and Fred N4IXL getting the repeater ready for the meeting.

Gary is checking out the RARS' new video projector. The projector can show computer graphics, videotape and DVD (even HDTV!). RARS will use the projector for meetings and classes. Gary's xyl Cyndi KD4ACW (seated) actually hooked the projector up, but Gary stepped into the limelight as the picture was snapped.

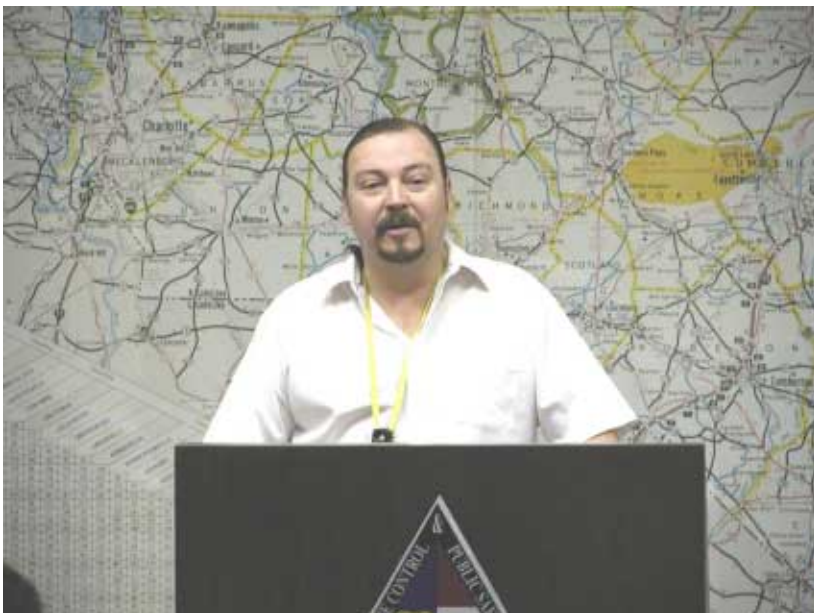


Photo by David KF4VXJ

John KG4HDT

February 1, 2003 Wake ARES held a debriefing at the State EOC. John KG4HDT, EC Wake ARES, facilitated the meeting with Tom N4TAB. Story on page 5.